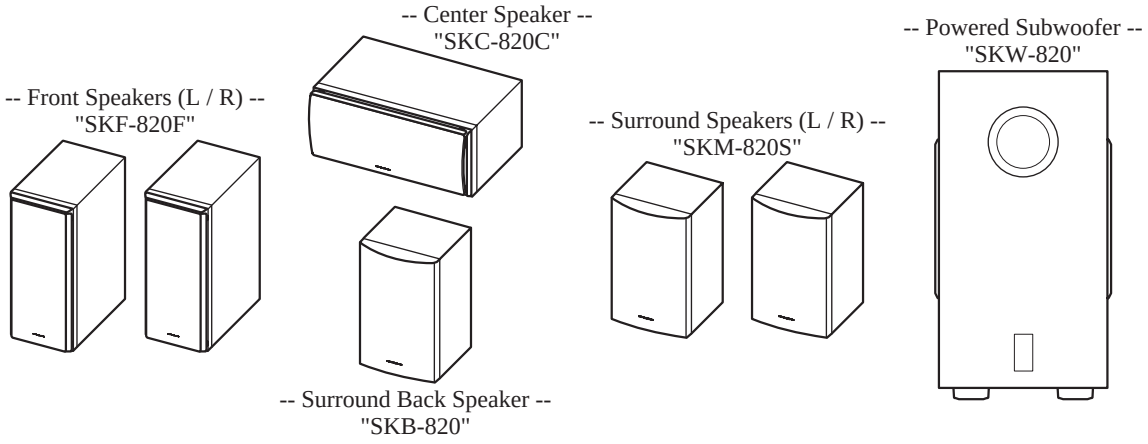
Ref. No. 3841
102004

ONKYO SERVICE MANUAL

6.1-CH HOME THEATER SPEAKER PACKAGE

MODEL HTP-820(S)



Silver model

SMDC	120V AC, 60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
IMAGINATIVE SIGHT & SOUND

SPECIFICATIONS

Powered Subwoofer (SKW-820)

Type :	Bass-reflex
Input sensitivity/impedance :	300 mV / 100 kohm
Maximum output power :	220 W (Dynamic Power)
Frequency response :	23 Hz - 150 Hz
Cabinet capacity :	1.59 cubic feet (44.9 L)
Dimensions (W x H x D) :	11-5/16" x 21-1/8" x 16-3/16" (287 x 536 x 411 mm)
Weight :	43.3 lbs. (19.7 kg)
Drivers unit :	8 inch (20 cm) Cone Woofer x 2
Power supply :	AC 120 V, 60 Hz
Power consumption :	170 W
Other :	Auto Standby function

Center Speaker (SKC-820C)

Type :	2 Way Bass-reflex
Impedance :	8 ohm
Maximum input power :	130 W
Output sound pressure level :	85 dB/W/m
Frequency response :	60 Hz - 45 kHz
Crossover frequency :	5 kHz
Cabinet capacity :	0.27 cubic feet (7.7 L)
Dimensions (W x H x D) :	15-1/4" x 6-3/16" x 7-15/16" (387 x 157 x 202 mm)
Weight :	9.5 lbs. (4.3 kg)
Drivers unit :	4 inch (10 cm) A-OMF Cone Woofer x 2 1 inch (2.5 cm) Soft Dome tweeter
Terminal :	Color-coded binding post
Other :	Magnetic shielding

Front Speaker (SKF-820F)

Type :	2 Way Bass-reflex
Impedance :	8 ohm
Maximum input power :	130 W
Output sound pressure level :	86 dB/W/m
Frequency response :	50 Hz - 45 kHz
Crossover frequency :	5 kHz
Cabinet capacity :	0.38 cubic feet (10.8 L)
Dimensions (W x H x D) :	7-7/16" x 16-1/2" x 9-5/16" (189 x 419 x 236 mm)
Weight :	13.7 lbs. (6.2 kg)
Drivers unit :	5-1/4 inch (13 cm) A-OMF Cone Woofer x 2 1 inch (2.5 cm) Soft Dome tweeter
Terminal :	Color-coded binding post
Other :	Magnetic shielding

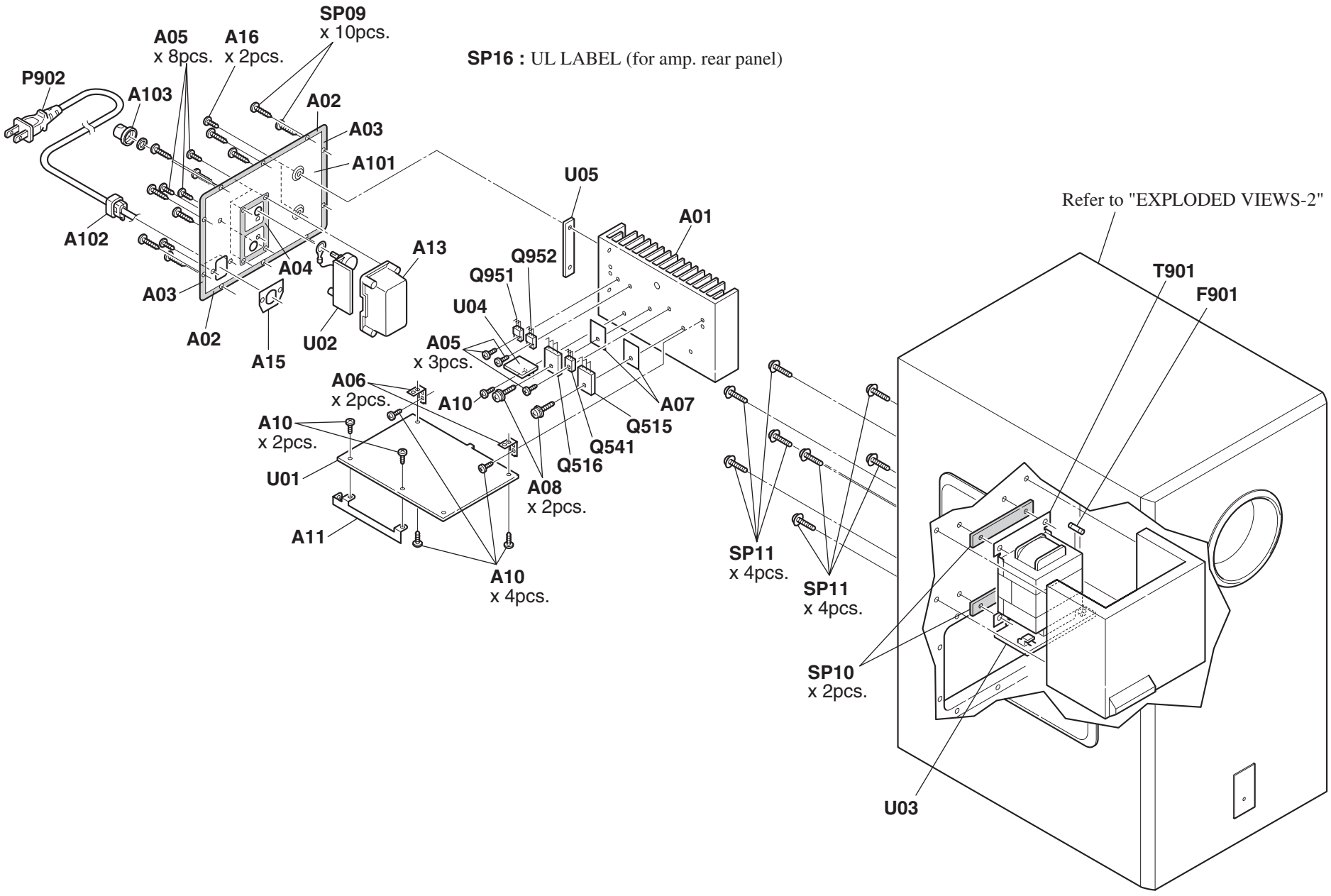
Surround Speaker (SKM-820S/SKB-820)

Type :	2 Way Bass-reflex
Impedance :	8 ohm
Maximum input power :	130 W
Output sound pressure level :	82 dB/W/m
Frequency response :	60 Hz - 50 kHz
Crossover frequency :	5 kHz
Cabinet capacity :	0.09 cubic feet (2.7 L)
Dimensions (W x H x D) :	6-7/8" x 10-7/16" x 4-15/16" (175 x 265 x 125 mm)
Weight :	3.7 lbs. (1.7 kg)
Drivers unit :	4 inch (10 cm) Cone Woofer 1 inch (2.5 cm) Balanced Dome tweeter
Terminal :	Color-coded binding post

Specifications and appearance are subject to change without prior notice.

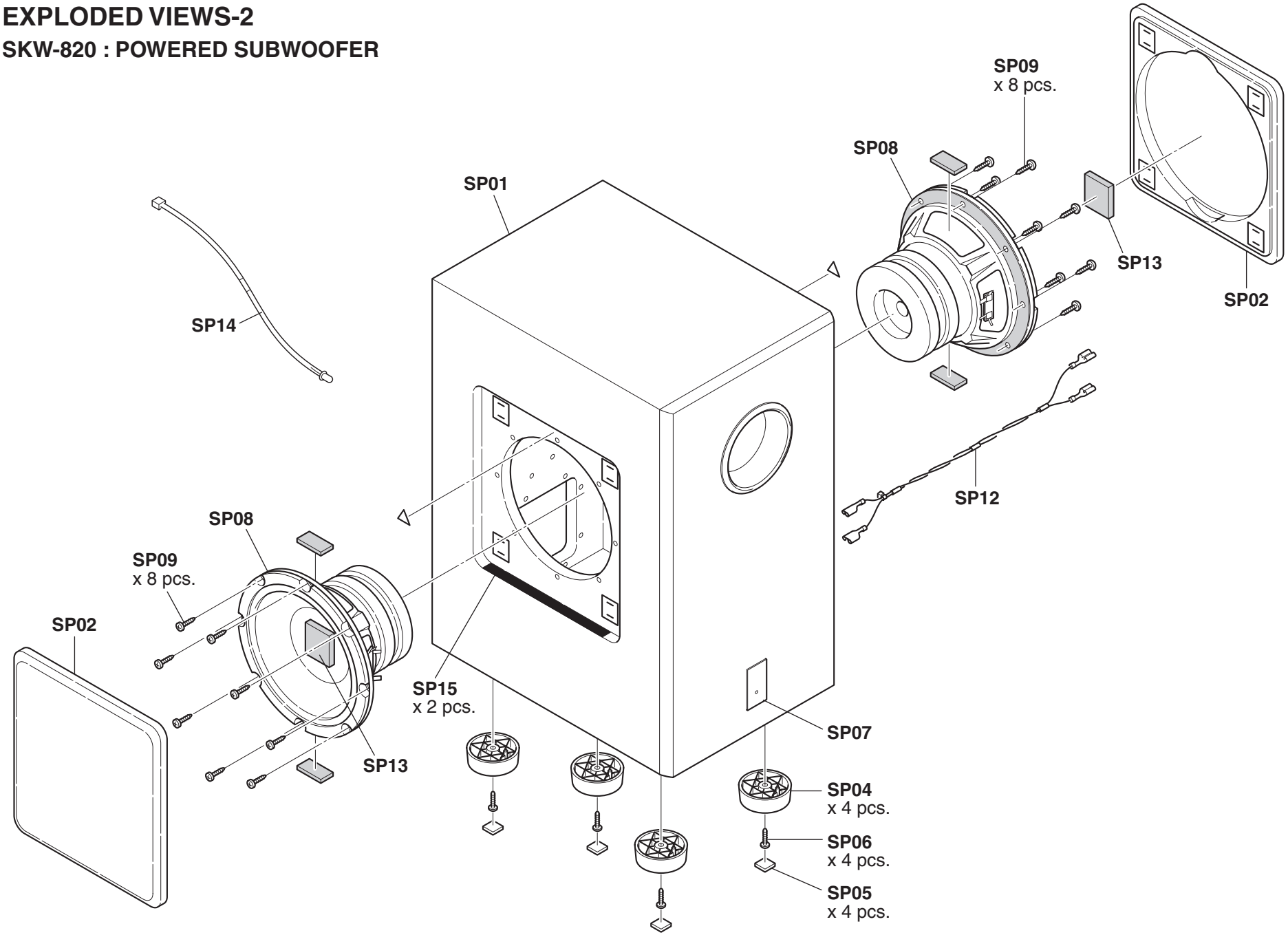
EXPLODED VIEWS-1

SKW-820 : POWERED SUBWOOFER



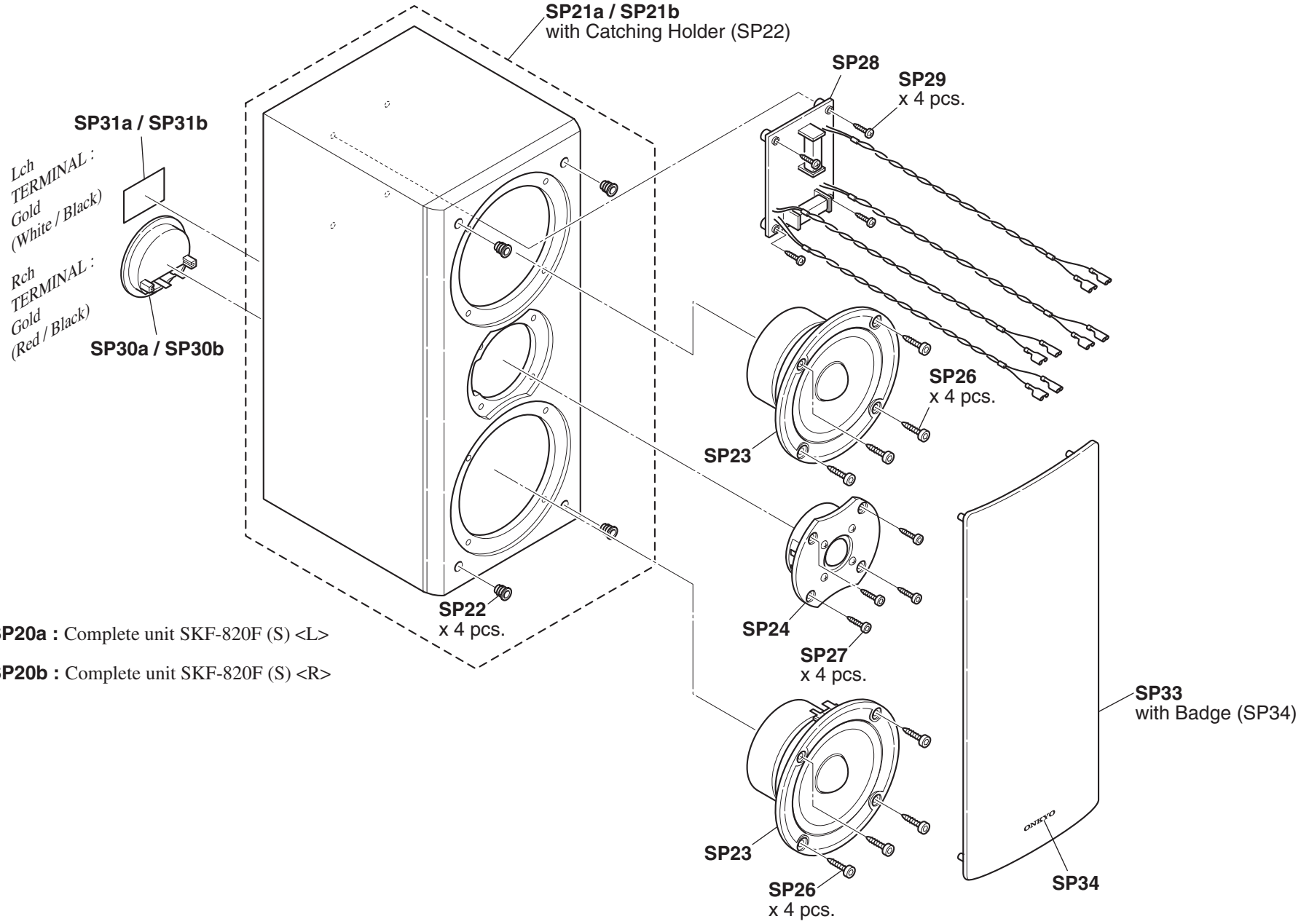
EXPLODED VIEWS-2

SKW-820 : POWERED SUBWOOFER



EXPLODED VIEWS-3

SKF-820F <L> / SKF-820F <R>



SP20a : Complete unit SKF-820F (S) <L>

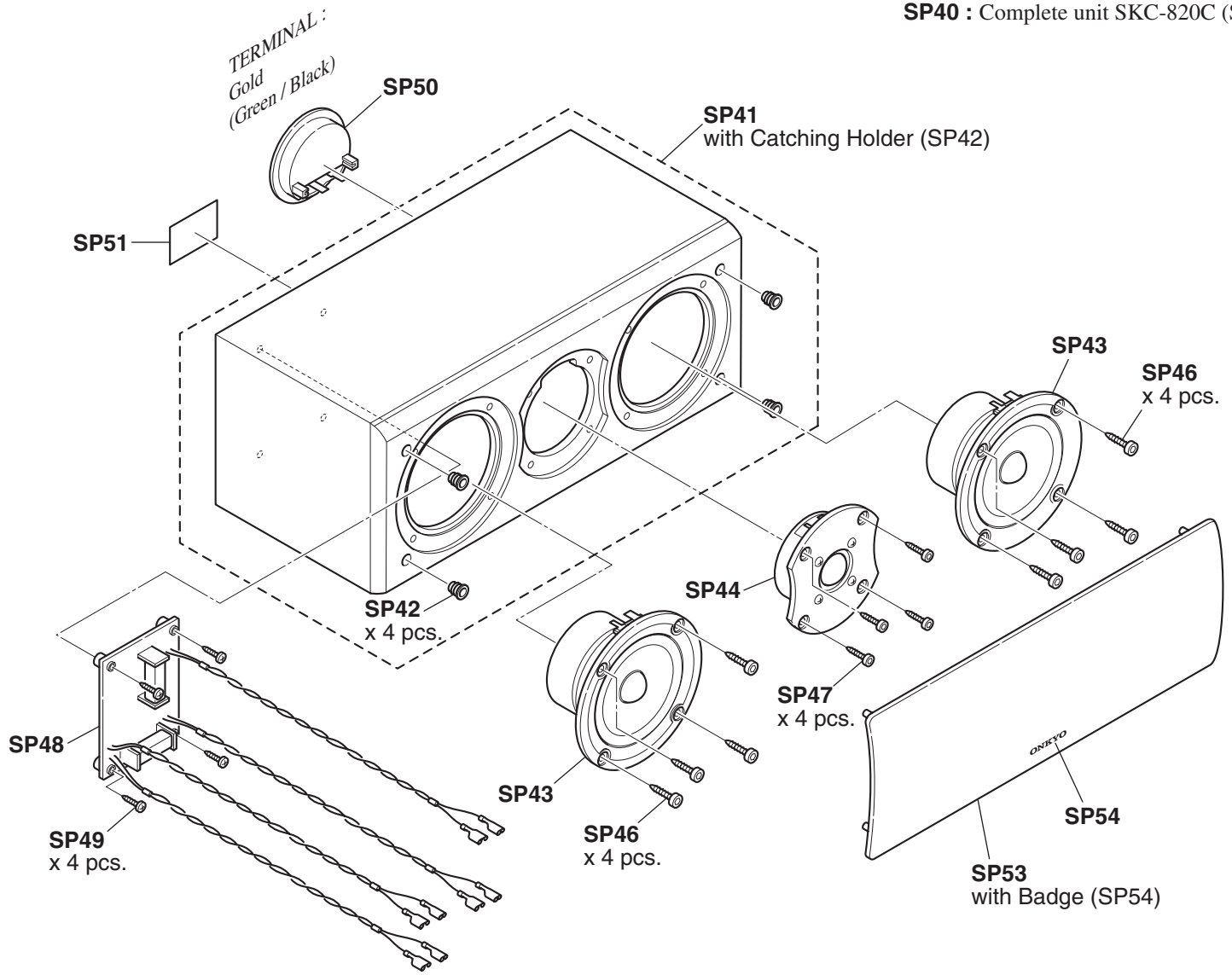
SP20b : Complete unit SKF-820F (S) <R>

HTP-820

EXPLODED VIEWS-4

SKC-820C

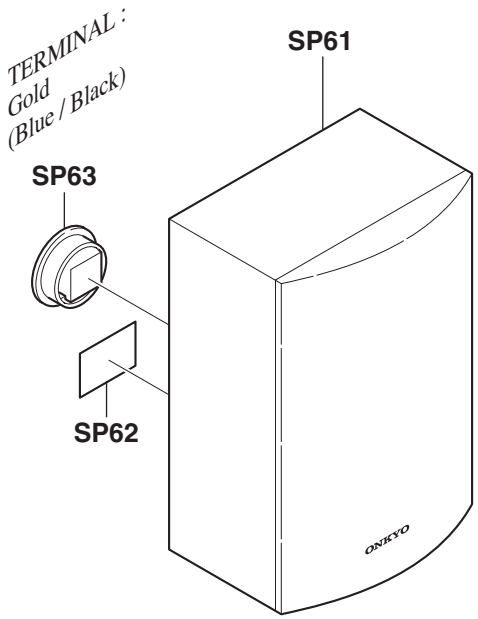
SP40 : Complete unit SKC-820C (S)



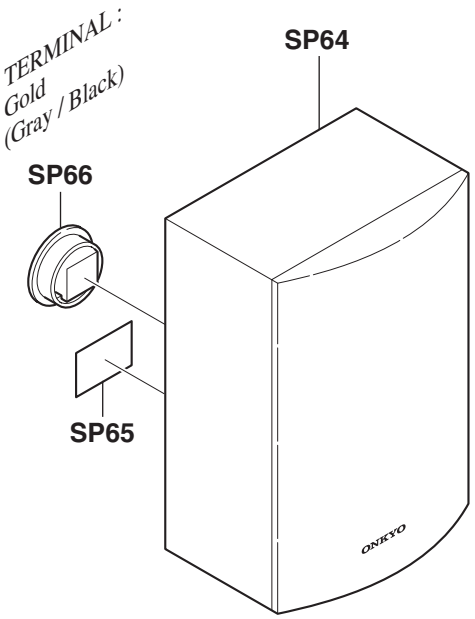
HTP-820

EXPLODED VIEWS-5

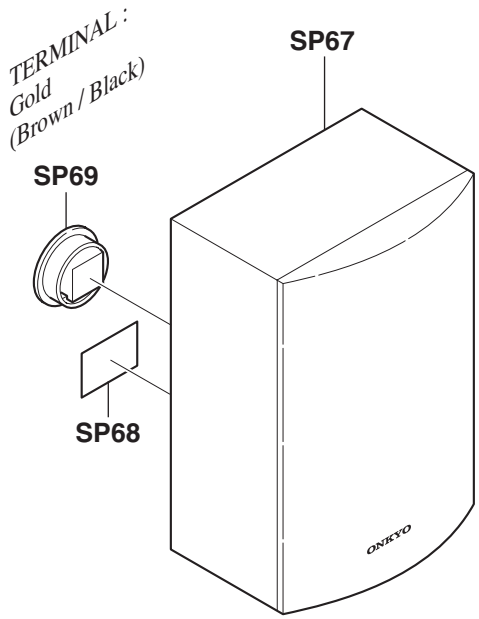
SKM-820S <L> / SKM-820S <R> / SKB-820



"SKM-820S <L>"



"SKM-820S <R>"



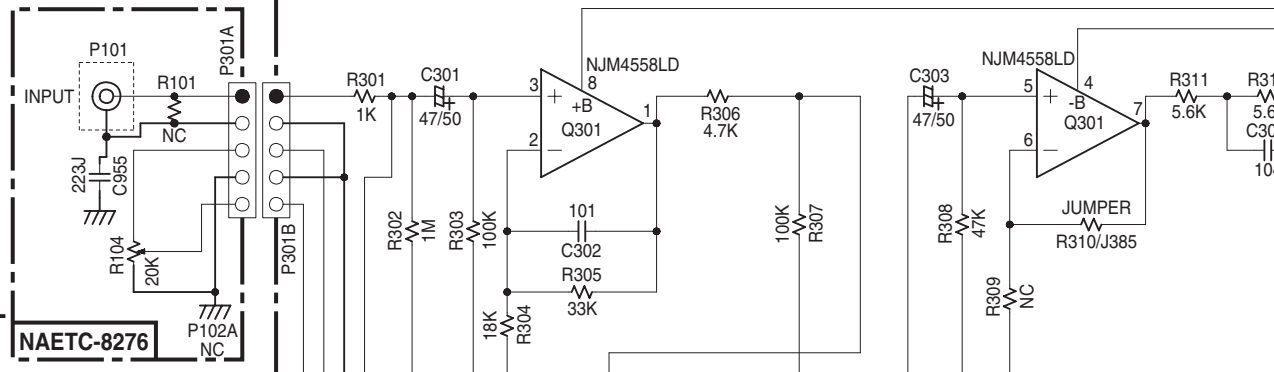
"SKB-820"

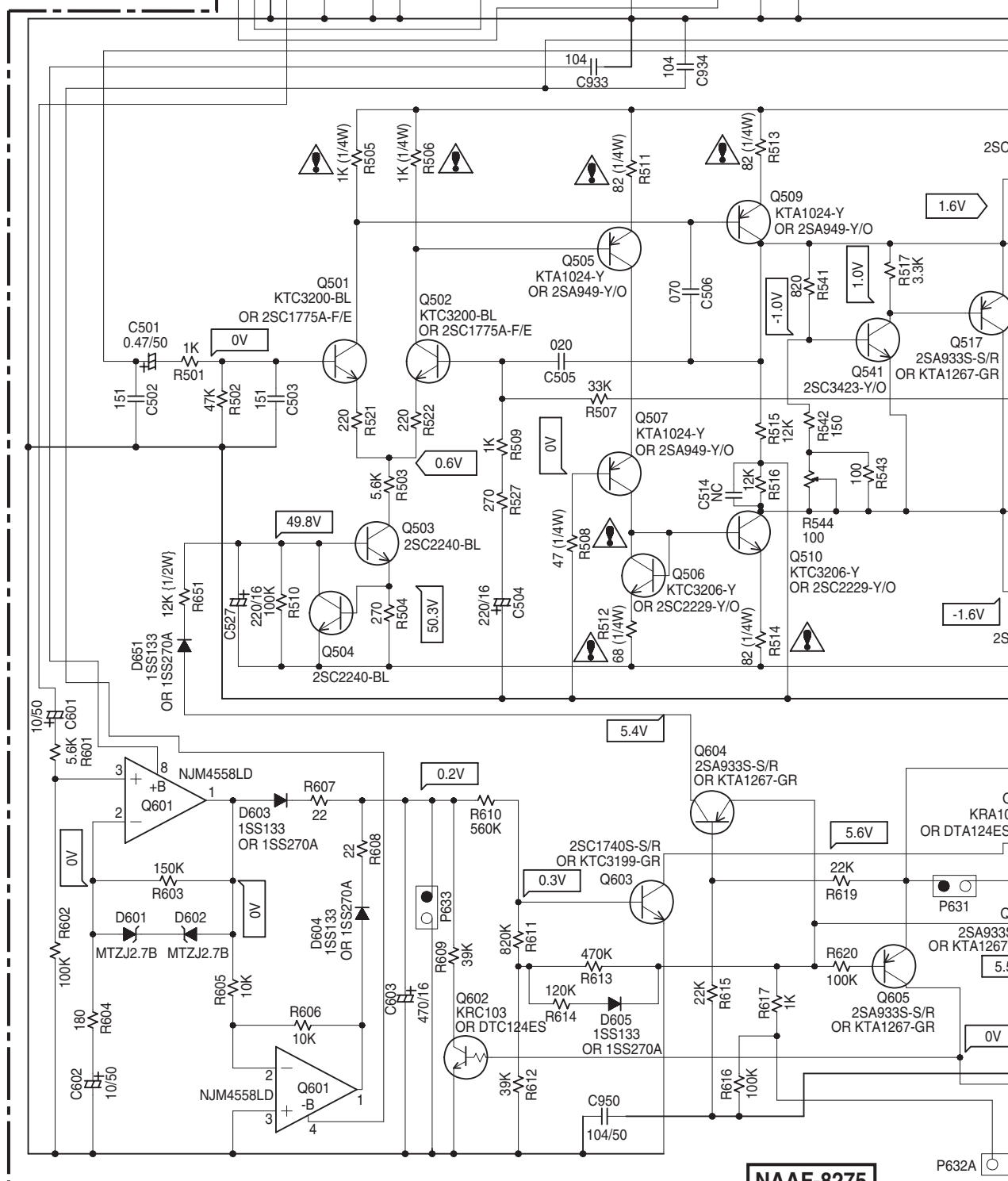
SCHEMATIC DIAGRAM

SKW-820 : POWERED SUBWOOFER

U02

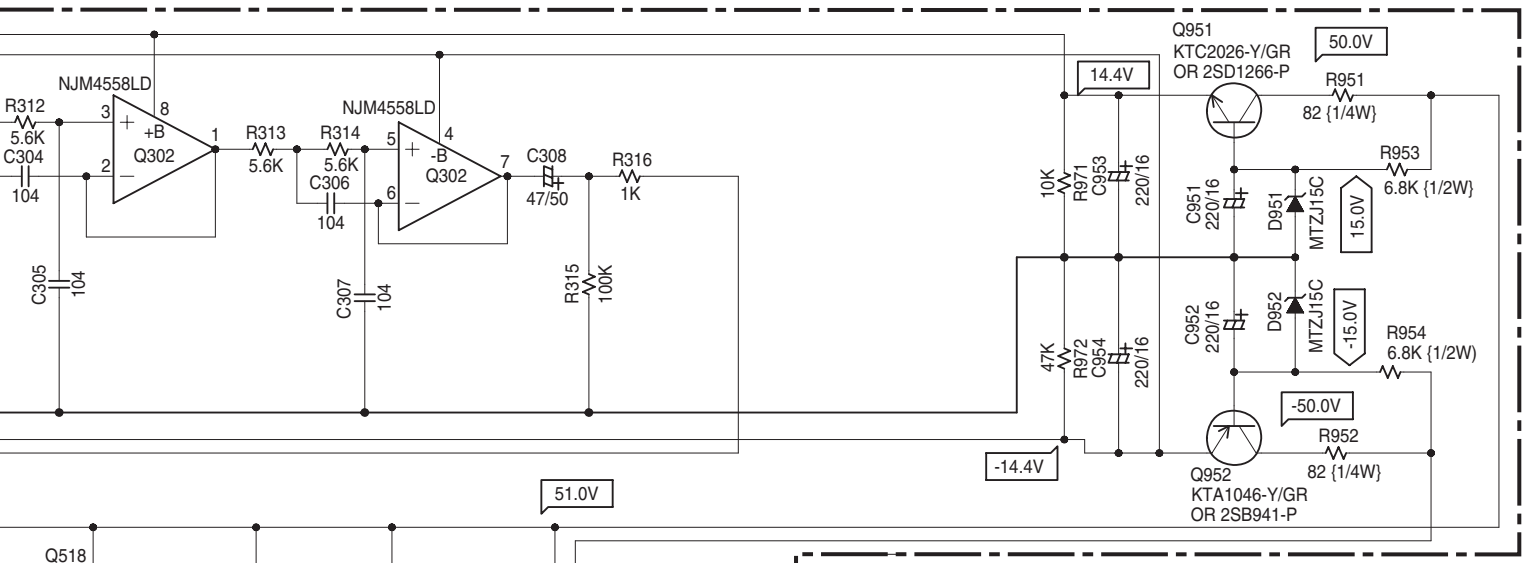
INPUT TERMINAL PC BOARD

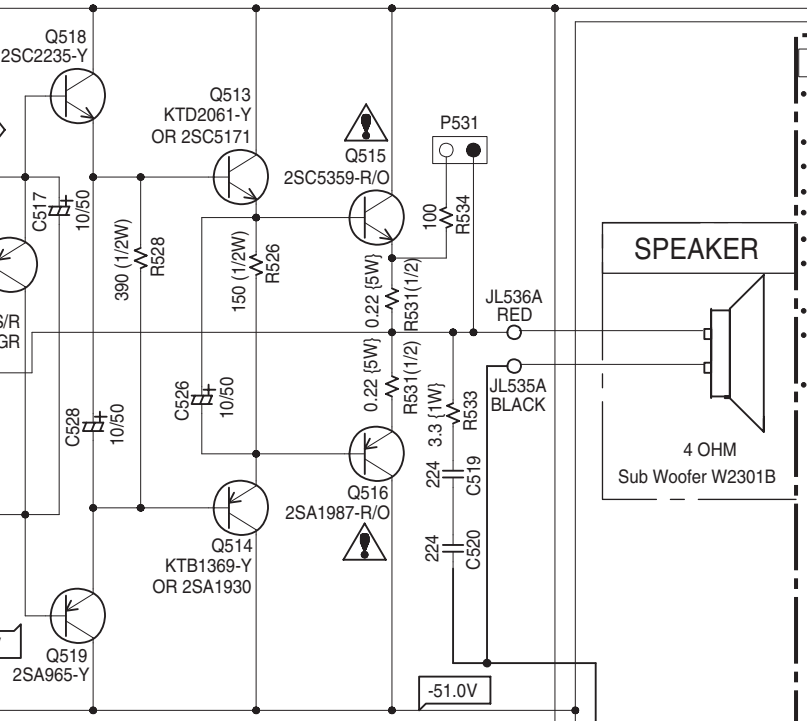




U01 AMPLIFIER PC BOARD

E F G H





NOTE

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- VOLTAGE (MEASURED WITH VOLTMETER) ⟨ ▭ ⟩ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

CAUTION

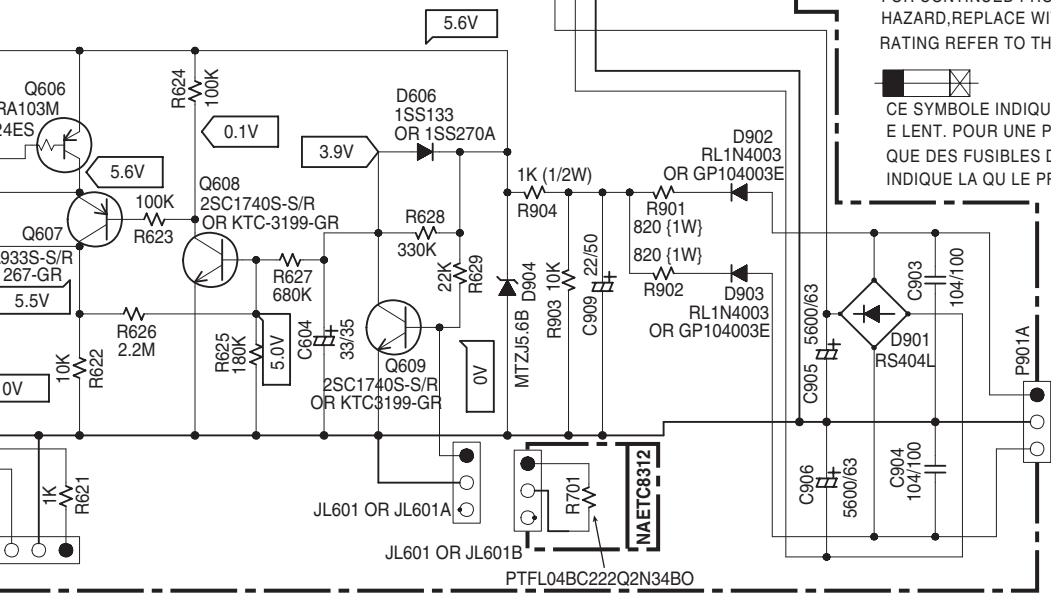
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

ATTENTION

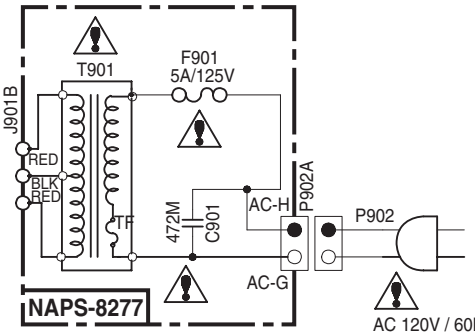
AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST E LENT. POUR UNE PROTECTION PERMANENTE,N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.



U04 THERMAL SENSOR PC BOARD



U03 POWER TRANSFORMER PC BOARD

SCHEMATIC DIAGRAM

SKW-820 : POWERED SUBWOOFER

U02
INPUT TERMINAL PC BOARD
NAETC-8276

P101 INPUT, R101 NC, P301A, P301B, P102A NC, R104 20K, 223J C955

R301 1K, C301 47/50, R302 1M, R303 100K, R304 18K, NJM4558LD Q301, C302 101, R305 33K, R306 4.7K, R307 100K

C303 47/50, R308 47K, R309 NC, NJM4558LD Q301, JUMPER R310/J385, R311 5.6K, R312 5.6K, C304 104, NJM4558LD Q302, C305 104, R313 5.6K, R314 5.6K, C306 104, NJM4558LD Q302, C307 104, C308 47/50, R315 100K, R316 1K

C933 104, C934 104

Q951 KTC2026-Y/GR OR 2SD1266-P, 50.0V, R951 82 {1/4W}, R953 6.8K {1/2W}, D951 MTZJ15C, 15.0V, C951 220/16, 14.4V, R971 10K, C953 220/16

Q952 KTA1046-Y/GR OR 2SB941-P, -50.0V, R952 82 {1/4W}, R954 6.8K {1/2W}, D952 MTZJ15C, -15.0V, C952 220/16, -14.4V, R972 47K, C954 220/16

51.0V

1K (1/4W) R505, 1K (1/4W) R506, 82 (1/4W) R511, 82 (1/4W) R513

Q509 KTA1024-Y OR 2SA949-Y/O, Q505 KTA1024-Y OR 2SA949-Y/O, Q518 2SC2235-Y, 1.6V, Q513 KTD2061-Y OR 2SC5171, Q515 2SC5359-R/O, P531

Q501 KTC3200-BL OR 2SC1775A-F/E, Q502 KTC3200-BL OR 2SC1775A-F/E, C501 0.47/50, 1K R501, 0V, C502 151, C503 151, 47K R502, 220 R521, 220 R522, C505 020, 33K R507, 070 C506, -1.0V, 820 R541, 1.0V, R517 3.3K, C517 10/50, Q541 2SC3423-Y/O, Q517 2SA933S-S/R OR KTA1267-GR, 390 (1/2W) R528, 150 (1/2W) R526, 100 R534, JL536A RED, 0.22 (5W) R530, 0.22 (5W) R531 (1/2), JL535A BLACK, 3.3 (1W) R533, 224 C519, 224 C520

SPEAKER, 4 OHM Sub Woofer W2301B

Q507 KTA1024-Y OR 2SA949-Y/O, 0.6V, 5.6K R503, 1K R509, 0V, 270 R527, 47 (1/4W) R508, 49.8V, Q503 2SC2240-BL, 12K (1/2W) R651, D651 1SS133 OR 1SS270A, C527 220/16, 100K R510, 270 R504, 50.3V, Q504 2SC2240-BL, C504 220/16, R515 12K, R542 150, C514 NC, 12K R516, R544 100, 100 R543, Q510 KTC3206-Y OR 2SC2229-Y/O, Q506 KTC3206-Y OR 2SC2229-Y/O, R512 68 (1/4W), 82 (1/4W) R514, -1.6V, Q519 2SA965-Y, C528 10/50, C526 10/50, Q516 2SA1987-R/O, Q514 KTB1369-Y OR 2SA1930, -51.0V

10/50 C601, 5.6K R601, NJM4558LD Q601, D603 1SS133 OR 1SS270A, R607 22, 0.2V, R610 560K, 5.4V, Q604 2SA933S-S/R OR KTA1267-GR, 0V, 150K R603, D601 MTZJ2.7B, D602 MTZJ2.7B, D604 1SS133 OR 1SS270A, 22 R608, 100K R602, R605 10K, R606 10K, NJM4558LD Q601, C602 10/50, 180 R604, C603 470/16, P633, R609 39K, 820K R611, 2SC1740S-S/R OR KTC3199-GR Q603, 0.3V, 470K R613, 120K R614, D605 1SS133 OR 1SS270A, Q602 KRC103 OR DTC124ES, 39K R612, C950 104/50, 5.6V, 22K R619, P631, Q606 KRA103M OR DTA124ES, 5.6V, Q607 2SA933S-S/R OR KTA1267-GR, 100K R623, 0.1V, R624 100K, 3.9V, D606 1SS133 OR 1SS270A, Q608 2SC1740S-S/R OR KTC-3199-GR, R628 330K, 1K (1/2W) R904, D902 RL1N4003 OR GP104003E, R901 820 {1W}, 820 {1W} R902, D903 RL1N4003 OR GP104003E, 100K R620, Q605 2SA933S-S/R OR KTA1267-GR, 5.5V, R626 2.2M, R627 680K, R625 180K, 5.0V, C604 33/35, Q609 2SC1740S-S/R OR KTC3199-GR, 0V, 22K R615, R617 1K, R616 100K, 10K R622, 22K R629, D904 MTZJ5.6B, R903 10K, C909 22/50, C905 5600/63, D901 RS404L, C903 104/100, C906 5600/63, C904 104/100, P901A, J901B, RED, BLK, RED, T901, F901 5A/125V, TF, 472M C901, AC-H, AC-G, P902A, P902, AC 120V / 60HZ

1K R621, P632A, JL601 OR JL601A, JL601 OR JL601B, R701, NAETC8312, PTFL04BC222Q2N34BO

NAAF-8275

NAPS-8277

U01 AMPLIFIER PC BOARD

U04 THERMAL SENSOR PC BOARD

U03 POWER TRANSFORMER PC BOARD

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- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▭ ← PRINTING SIDE
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CAUTION

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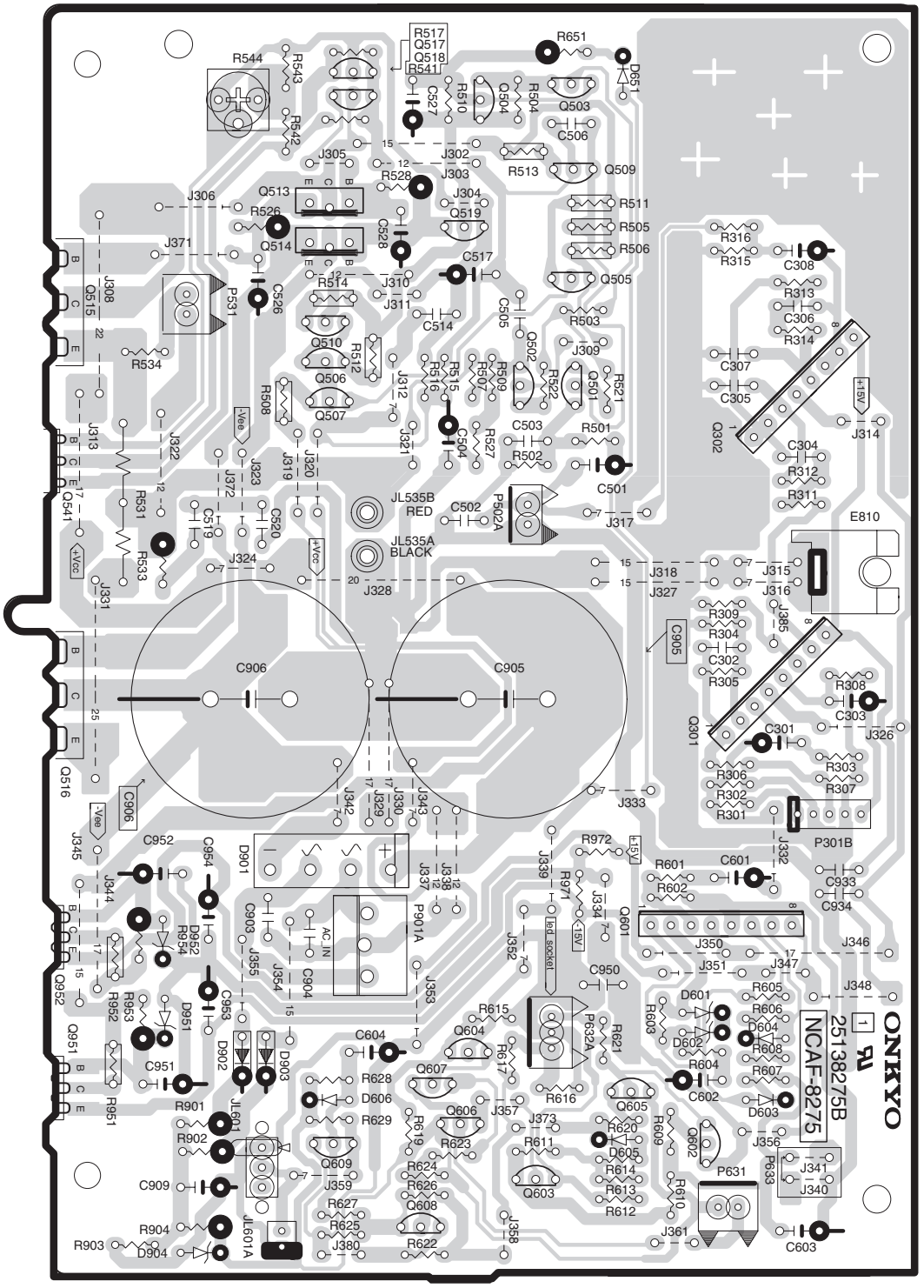
PRINTED CIRCUIT BOARD VIEWS-1

SKW-820 : POWERED SUBWOOFER

U01 AMPLIFIER PC BOARD (NAAF-8275)

Soldering side

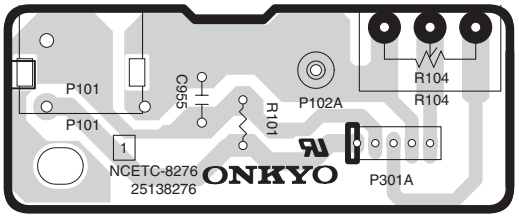


PRINTED CIRCUIT BOARD VIEWS-2

SKW-820 : POWERED SUBWOOFER

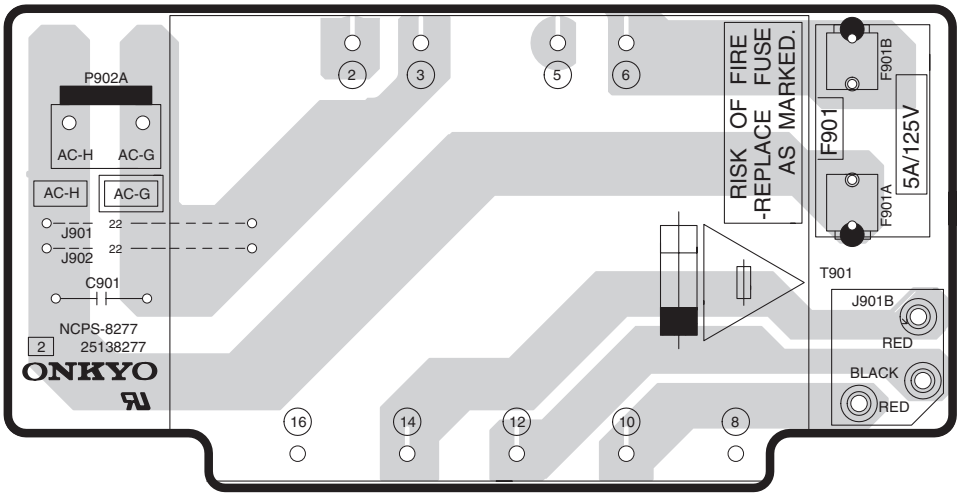
U02 INPUT TERMINAL PC BOARD (NAETC-8276)

Soldering side



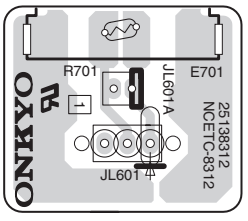
U03 POWER TRANSFORMER PC BOARD (NAPS-8277)

Soldering side



U04 THERMAL SENSOR PC BOARD (NAETC-8312)

Soldering side



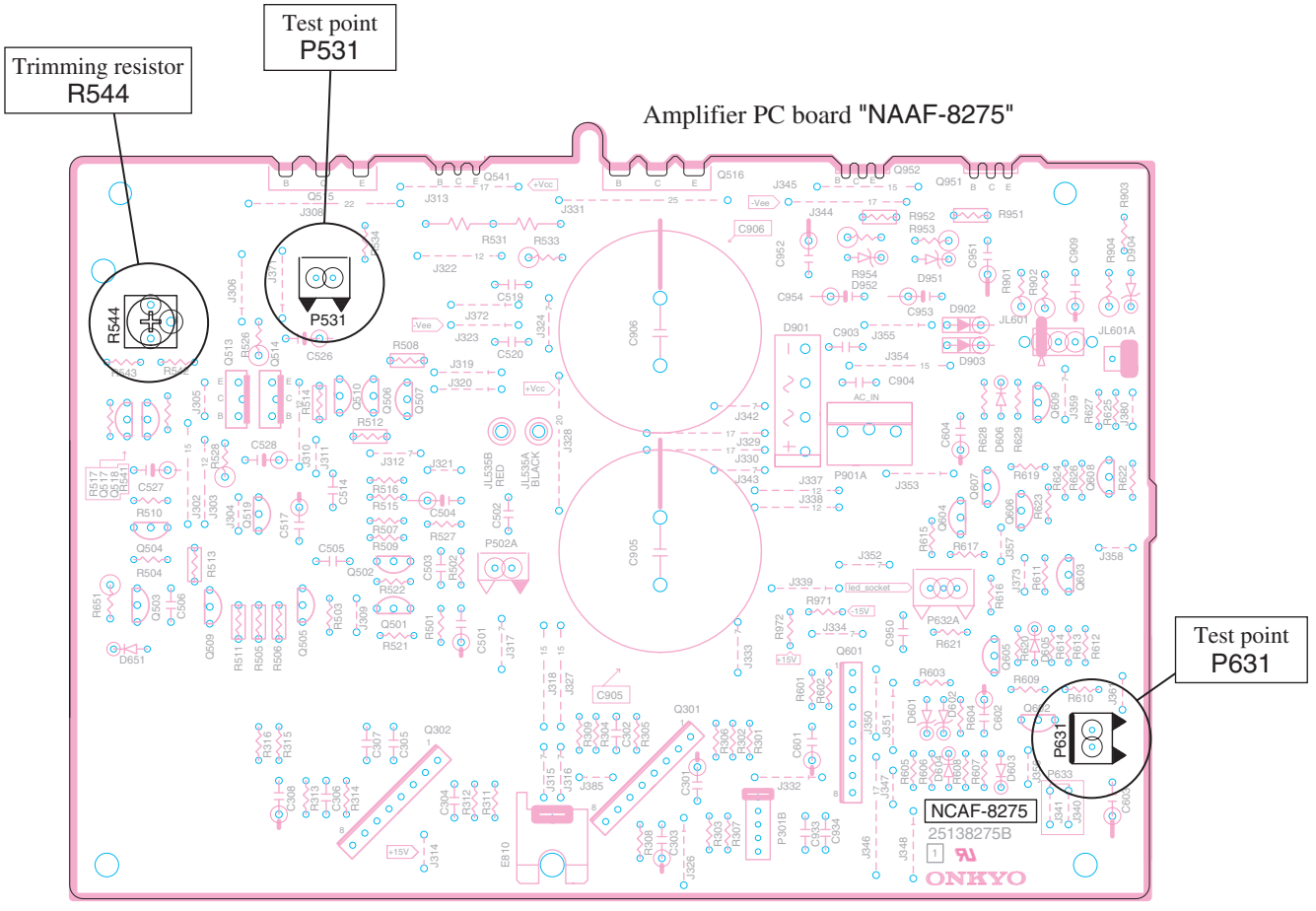
U05 HOLDER PC BOARD (NAETC-8317)

No PC board view

ADJUSTMENT PROCEDURE

SKW-820 : POWERED SUBWOOFER /
ADJUSTMENT OF IDLING CURRENT

1. Before adjustment of idling current, turn the trimming resistor R544 to counter clockwise.
2. Short test point P631 for Amplifier is under active mode.
3. Connect the DC voltmeter to test point P531.
4. After turn POWER to ON, adjust the trimming resistor R544 so that the reading of voltmeter becomes 0.25 mV.
   <Note> No speaker load and No input signal.
5. Confirm the voltage of above point after five minutes.
6. When less than 4.40 mV : Readjust the trimming resistor above so that the voltage becomes 4.5 mV to 5.0 mV.
   When 4.41 mV to 5.50 mV : Not necessary to adjust.
   When more than 5.51 mV : Readjust the trimming resistor above so that the voltage becomes 5.0 mV to 5.5 mV.



HTP-820

EXPLODED VIEWS PARTS LIST

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK ! ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

<Notes>
<L> : Lch
<R> : Rch

	REF. NO.	PART NAME	DESCRIPTION	Q'TY	PART NO. (SN)	MARK
EXPLODED	**SKW-820 (S) : POWERED SUBWOOFER**					
EXPLODED	**AMPLIFIER SECTION (SKW-820)**					
EXPLODED	Q515	TR	2SC5359-R	1	2203082	!
EXPLODED	Q515 or	TR	2SC5359-O	(1)	2203083	!
EXPLODED	Q516	TR	2SA1987-R	1	2203072	!
EXPLODED	Q516 or	TR	2SA1987-O	(1)	2203073	!
EXPLODED	Q541	TR	2SC3423-Y	1	2202104	
EXPLODED	Q541 or	TR	2SC3423-O	(1)	2202103	
EXPLODED	Q951	TR	KTC2026-Y	1	2203594	
EXPLODED	Q951 or	TR	KTC2026-GR	(1)	2203595	
EXPLODED	Q951 or	TR	2SD1266-P	(1)	2202754	
EXPLODED	Q952	TR	KTA1046-Y	1	2203614	
EXPLODED	Q952 or	TR	KTA1046-GR	(1)	2203615	
EXPLODED	Q952 or	TR	2SB941-P	(1)	2202764	
EXPLODED	**<Note>**					
EXPLODED	When replacement the following the transistor, made from the same HFE rank as the original type.					
EXPLODED	Q515, Q516, Q541, Q951, Q952					
EXPLODED	A01	HEAT SINK	RAD-197	1	27160547	
EXPLODED	A02	CUSHION	AF (t1.0x7x183)	2	28141572A	
EXPLODED	A03	CUSHION	AG (t1.0x7x123)	2	28141573A	
EXPLODED	A04	CUSHION	(IN)	1	28141574	
EXPLODED	A05	SCREW	3TTB+8B (BC)	8	838430088	
EXPLODED	A05	SCREW	3TTB+8B (BC)	3	838430088	
EXPLODED	A06	BRACKET	BRACKET	2	27130745	
EXPLODED	A07	ISO SHEET	AC262	2	223025	
EXPLODED	A08	SCREW	3SMS8W.SW+14B (BC)	2	801433	
EXPLODED	A10	SCREW	3TTB+8B	1	838130088	
EXPLODED	A10	SCREW	3TTB+8B	4	838130088	
EXPLODED	A10	SCREW	3TTB+8B	2	838130088	
EXPLODED	A11	RETAINER	(PCB)	1	27141912	
EXPLODED	A13	COVER	---	1	28184894	
EXPLODED	A15	RETAINER	(AC)	1	27141913	
EXPLODED	A16	SCREW	3TTB+12B (BC)	2	838430128	
EXPLODED	A101	REAR PANEL	(MD)	1	27123338A	
EXPLODED	A102	BUSHING	S-RELIEF #2271	1	27300750	!
EXPLODED	A103	KNOB	(VOL)	1	28326201	
EXPLODED	F901	FUSE	5A-UL/T-237	1	252164	!
EXPLODED	P902	AC CORD	AS-UC-2	1	253333VOL	!
EXPLODED	P902 or	AC CORD	AS-UC-2	(1)	253368LTK	!
EXPLODED	T901	P TRANS	NPT-1495D	1	2301745	!
EXPLODED	U01	AMPLIFIER PC BOARD	NAAF-8275-1B	1	1B032575-1B	
EXPLODED	U02	INPUT TERMINAL PC BOARD	NAETC-8276-1B	1	1B032576-1B	

EXPLODED	U03	POWER TRANSFORMER PC BOARD	NAPS-8277-1B	1	1B032577-1B	
EXPLODED	U04	THERMAL SENSOR PC BOARD	NAETC-8312-1B	1	1B032512-1B	
EXPLODED	U05	HOLDER PC BOARD	NAETC-8317-1B	1	1B032517-1B	
EXPLODED	**SKW-820 (S) : POWERED SUBWOOFER**					
EXPLODED	**SPEAKER SECTION (SKW-820)**					
EXPLODED	SP01	CABINET ASS'Y	SKW-820 (S)	1	000-SKW820GYSER	
EXPLODED	SP02	CLOTH FRAME ASS'Y	SKW-820	2	113-03W820-00	
EXPLODED	SP04	PLASTIC FOOT	---	4	249-W82001B-10	
EXPLODED	SP05	CUSHION	1.5T x 19 x 19 (For FOOT)	4	442-915103-00	
EXPLODED	SP06	WOOD SCREW	3 x 20 BIND (For FOOT)	4	411-B83020AB1	
EXPLODED	SP07	NAME PLATE	(SKW-820 / ONKYO)	1	D231-W82001B-20	
EXPLODED	SP08	WOOFER	8" (20cm) / 6 ohm 60 W (ONKYO)	2	W20176D	
EXPLODED	SP09	WOOD SCREW	4STT + 20A (FOR AMP x 10 / SP x 16)	26	837440204	
EXPLODED	SP10	CUSHION	CUSHION PCB (For P-TRANSFORMER)	2	443-SKW-820-00	
EXPLODED	SP11	SCREW	4 x 25 (For POWER TRANSFORMER)	8	412-D840250B1	
EXPLODED	SP12	SPEAKER CORD	---	1	312-SKW820-00	
EXPLODED	SP13	BUTYL	MS665 18 x 18 x 6T	2	560-6MS665-00	
EXPLODED	SP14	LED HARNESS ASS'Y	---	1	335-SKW520-00	
EXPLODED	SP15	CUSHION	PEF 5 x 220 x 1T (For CLOTH FRAME)	2	442-101205-00	
EXPLODED	SP16	UL LABEL	(For AMP. REAR PANEL)	1	660-HTS870-00	
EXPLODED	**SKF-820F (S) <L> / <R> : FRONT SPEAKERS**					
EXPLODED	SP20a	COMPLETE UNIT	"SKF-820F (S) <L>"	1	000-SKF820FLGY	<L>
EXPLODED	SP20b	COMPLETE UNIT	"SKF-820F (S) <R>"	1	000-SKF820FRGY	<R>
EXPLODED	SP21a	CABINET ASS'Y	SKF-820F (S) <L> (Without TERMINAL)	1	000-SKF820LGYSER	<L>
EXPLODED	SP21b	CABINET ASS'Y	SKF-820F (S) <R> (Without TERMINAL)	1	000-SKF820RGYSER	<R>
EXPLODED	SP22	CATCHING HOLDER	---	4	D230-DN3X01B-01	
EXPLODED	SP23	WOOFER	W1367A (ONKYO)	2	W1367A	
EXPLODED	SP24	TWEETER	TW3208A (ONKYO)	1	TW3208A	
EXPLODED	SP26	SCREW	4 x 16 HEX 8.3ED (For WOOFER)	8	411-H84016AB2	
EXPLODED	SP27	SCREW	3.5 x 16 HEX 7.0ED (For TWEETER)	4	411-H83516AB1	
EXPLODED	SP28	NETWORK ASS'Y	---	1	311-870THX-00	
EXPLODED	SP29	SCREW	3.5 x 20 BIND (For N / W)	4	411-B83520AB1	
EXPLODED	SP30a	TERMINAL	WHITE / BLACK	1	332-H8180G-20	<L>
EXPLODED	SP30b	TERMINAL	RED / BLACK	1	332-H8180G-00	<R>
EXPLODED	SP31a	SPEC LABEL (L)	---	1	600-KF820L-00	<L>
EXPLODED	SP31b	SPEC LABEL (R)	---	1	600-KF820R-00	<R>
EXPLODED	SP33	GRILLE ASS'Y	(WITH GRILLE CLOTH and BADGE)	1	D201-F82001S-90	
EXPLODED	SP34	BADGE	ONKYO	1	D213-M52001B-20	
EXPLODED	**SKC-820C (S) : CENTER SPEAKER**					
EXPLODED	SP40	COMPLETE UNIT	"SKC-820C (S)"	1	000-SKC820CGY	
EXPLODED	SP41	CABINET ASS'Y	SKC-820C (S) (Without TERMINAL)	1	000-SKC820GYSER	
EXPLODED	SP42	CATCHING HOLDER	---	4	D230-DN3X01B-01	
EXPLODED	SP43	WOOFER	W1069A (ONKYO)	2	W1069A	
EXPLODED	SP44	TWEETER	TW3208A (ONKYO)	1	TW3208A	
EXPLODED	SP46	SCREW	4 x 16 HEX 8.3ED (For WOOFER)	8	411-H84016AB2	
EXPLODED	SP47	SCREW	3.5 x 16 HEX 7.0ED (For TWEETER)	4	411-H83516AB1	
EXPLODED	SP48	NETWORK ASS'Y	---	1	311-870THX-00	
EXPLODED	SP49	SCREW	3.5 x 20 BIND (For N / W)	4	411-B83520AB1	
EXPLODED	SP50	TERMINAL	GREEN / BLACK	1	332-H8180G-30	
EXPLODED	SP51	SPEC LABEL	---	1	600-SKC820-00	
EXPLODED	SP53	GRILLE ASS'Y	(WITH GRILLE CLOTH and BADGE)	1	D201-C82001S-90	

EXPLODED	SP54	BADGE	ONKYO	1	D213-M52001B-20	
EXPLODED	**SKM-820S (S) <L> / <R> : SURROUND SPEAKERS**					
EXPLODED	SP61	COMPLETE UNIT	"SKM-820S (S) <L>"	1	000-SKM820SLGY	<L>
EXPLODED	SP62	SPEC LABEL (L)	---	1	600-KM820L-00	<L>
EXPLODED	SP63	TERMINAL	BLUE / BLACK	1	332-H8108G-50	<L>
EXPLODED	SP64	COMPLETE UNIT	"SKM-820S (S) <R>"	1	000-SKM820SRGY	<R>
EXPLODED	SP65	SPEC LABEL (R)	---	1	600-KM820R-00	<R>
EXPLODED	SP66	TERMINAL	GRAY / BLACK	1	332-H8108G-40	<R>
EXPLODED	**SKB-820 (S) : SURROUND BACK SPEAKER**					
EXPLODED	SP67	COMPLETE UNIT	"SKB-820 (S)"	1	000-SKB820GY	
EXPLODED	SP68	SPEC LABEL	---	1	600-SKB820-00	
EXPLODED	SP69	TERMINAL	BROWN / BLACK	1	332-H8108G-10	

PRINTED CIRCUIT BOARD PARTS LIST

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK ! ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

SKW-820

U01	AMPLIFIER PC BOARD (NAAF-8275-1B)
U02	INPUT TERMINAL PC BOARD (NAETC-8276-1B)
U03	POWER TRANSFORMER PC BOARD (NAPS-8277-1B)
U04	THERMAL SENSOR PC BOARD (NAETC-8312-1B)
U05	HOLDER PC BOARD (NAETC-8317-1B)

	CIRCUIT NO.	PART NAME	DESCRIPTION	Q'TY	PART NO. (SN)	MARK
PWB	Q301	IC	NJM4558L-D	1	22240293	
PWB	Q302	IC	NJM4558L-D	1	22240293	
PWB	Q601	IC	NJM4558L-D	1	22240293	
PWB	Q501	TR	KTC3200-BL	1	2215896	
PWB	Q501 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q501 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q502	TR	KTC3200-BL	1	2215896	
PWB	Q502 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q502 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q503	TR	2SC2240-BL	1	2211406	
PWB	Q504	TR	2SC2240-BL	1	2211406	
PWB	Q505	TR	KTA1024-Y	1	2215844	
PWB	Q505 or	TR	KTA1024-O	(1)	2215843	
PWB	Q505 or	TR	2SA949-Y	(1)	2211354	
PWB	Q505 or	TR	2SA949-O	(1)	2211353	
PWB	Q506	TR	KTC3206-Y	1	2215854	
PWB	Q506 or	TR	KTC3206-O	(1)	2215853	
PWB	Q506 or	TR	2SC2229-Y	(1)	2211634	
PWB	Q506 or	TR	2SC2229-O	(1)	2211633	
PWB	Q507	TR	KTA1024-Y	1	2215844	
PWB	Q507 or	TR	KTA1024-O	(1)	2215843	
PWB	Q507 or	TR	2SA949-Y	(1)	2211354	
PWB	Q507 or	TR	2SA949-O	(1)	2211353	

PWB	Q509	TR	KTA1024-Y	1	2215844
PWB	Q509 or	TR	KTA1024-O	(1)	2215843
PWB	Q509 or	TR	2SA949-Y	(1)	2211354
PWB	Q509 or	TR	2SA949-O	(1)	2211353
PWB	Q510	TR	KTC3206-Y	1	2215854
PWB	Q510 or	TR	KTC3206-O	(1)	2215853
PWB	Q510 or	TR	2SC2229-Y	(1)	2211634
PWB	Q510 or	TR	2SC2229-O	(1)	2211633
PWB	Q513	TR	KTD2061-Y	1	2203434
PWB	Q513 or	TR	2SD1763-E	(1)	2201945
PWB	Q513 or	TR	2SD1763A-D	(1)	2202034
PWB	Q513 or	TR	2SC5171	(1)	2203010
PWB	Q514	TR	KTB1369-Y	1	2203424
PWB	Q514 or	TR	2SB1186-E	(1)	2201935
PWB	Q514 or	TR	2SB1186A-D	(1)	2202024
PWB	Q514 or	TR	2SA1930	(1)	2203000
PWB	Q517	TR	2SA933S-S	1	2213355
PWB	Q517 or	TR	2SA933S-R	(1)	2213354
PWB	Q517 or	TR	KTA1267-GR	(1)	2215995
PWB	Q518	TR	2SC2235-Y	1	2211654
PWB	Q519	TR	2SA965-Y	1	2211644
PWB	Q602	TR	KRC103M	1	2215810
PWB	Q602 or	TR	DTC124ES	(1)	2213160
PWB	Q603	TR	2SC1740S-S	1	2213285
PWB	Q603 or	TR	2SC1740S-R	(1)	2213284
PWB	Q603 or	TR	KTC3199-GR	(1)	2215864
PWB	Q604	TR	2SA933S-S	1	2213355
PWB	Q604 or	TR	2SA933S-R	(1)	2213354
PWB	Q604 or	TR	KTA1267-GR	(1)	2215995
PWB	Q605	TR	2SA933S-S	1	2213355
PWB	Q605 or	TR	2SA933S-R	(1)	2213354
PWB	Q605 or	TR	KTA1267-GR	(1)	2215995
PWB	Q606	TR	KRA103M	1	2215780
PWB	Q606 or	TR	DTA124ES	(1)	2212600
PWB	Q606 or	TR	RN2203	(1)	2213580
PWB	Q607	TR	2SA933S-S	1	2213355
PWB	Q607 or	TR	2SA933S-R	(1)	2213354
PWB	Q607 or	TR	KTA1267-GR	(1)	2215995
PWB	Q608	TR	2SC1740S-S	1	2213285
PWB	Q608 or	TR	2SC1740S-R	(1)	2213284
PWB	Q608 or	TR	KTC3199-GR	(1)	2215864
PWB	Q609	TR	2SC1740S-S	1	2213285
PWB	Q609 or	TR	2SC1740S-R	(1)	2213284
PWB	Q609 or	TR	KTC3199-GR	(1)	2215864
PWB	**<Note>**				
PWB	When replacement the following the transistor, made from the same HFE rank as the original type.				
PWB	D601	ZENER D	MTZJ2.7B	1	224470272
PWB	D602	ZENER D	MTZJ2.7B	1	224470272
PWB	D603	DIODE	1SS133	1	223163
PWB	D603 or	DIODE	1SS270A	(1)	223205
PWB	D604	DIODE	1SS133	1	223163

PWB	D604 or	DIODE	1SS270A	(1)	223205	
PWB	D605	DIODE	1SS133	1	223163	
PWB	D605 or	DIODE	1SS270A	(1)	223205	
PWB	D606	DIODE	1SS133	1	223163	
PWB	D606 or	DIODE	1SS270A	(1)	223205	
PWB	D651	DIODE	1SS133	1	223163	
PWB	D651 or	DIODE	1SS270A	(1)	223205	
PWB	D901	DIODE	RS404L	1	22380277	
PWB	D902	DIODE	RL1N4003	1	22380260	
PWB	D902 or	DIODE	GP104003E	(1)	22380035	
PWB	D903	DIODE	RL1N4003	1	22380260	
PWB	D903 or	DIODE	GP104003E	(1)	22380035	
PWB	D904	ZENER D	MTZJ5.6B	1	224470562	
PWB	D951	ZENER D	MTZJ15C	1	224471503	
PWB	D952	ZENER D	MTZJ15C	1	224471503	
PWB	C301	VX C	CE04W50V-47M (VX)	1	393384707	
PWB	C302	TF C	ECQ-B50V-101K	1	374721015	
PWB	C303	VX C	CE04W50V-47M (VX)	1	393384707	
PWB	C304	TF C	ECQ-V50V-104J	1	374721044	
PWB	C305	TF C	ECQ-V50V-104J	1	374721044	
PWB	C306	TF C	ECQ-V50V-104J	1	374721044	
PWB	C307	TF C	ECQ-V50V-104J	1	374721044	
PWB	C308	VX C	CE04W50V-47M (VX)	1	393384707	
PWB	C501	VX C	CE04W50V-0.47M (VX)	1	393384797	
PWB	C502	TF C	ECQ-B50V-151K	1	374721515	
PWB	C503	TF C	ECQ-B50V-151K	1	374721515	
PWB	C504	VX C	CE04W16V-220M (VX)	1	393342217	
PWB	C505	CERA C	CC45CH50V-020C	1	345340201	
PWB	C506	CERA C	CC45CH50V-070D	1	345340702	
PWB	C517	VX C	CE04W50V-10M (VX)	1	393381007	
PWB	C519	TF C	ECQ-V50V-224J	1	374722244	
PWB	C520	TF C	ECQ-V50V-224J	1	374722244	
PWB	C526	VX C	CE04W50V-10M (VX)	1	393381007	
PWB	C527	VX C	CE04W16V-220M (VX)	1	393342217	
PWB	C528	VX C	CE04W50V-10M (VX)	1	393381007	
PWB	C601	VR C	CE04W50V-10M (VR)	1	394681007	
PWB	C602	VR C	CE04W50V-10M (VR)	1	394681007	
PWB	C603	VR C	CE04W10V-470M (VR)	1	394634717	
PWB	C603 or	VX C	CE04W16V-470M (VX)	(1)	393344717	
PWB	C604	VR C	CE04W35V-33M (VR)	1	394663307	
PWB	C604 or	ELECT C	CE04W35V-33M	(1)	354763309	
PWB	C901	IS C	DE1310E472M-KH	1	3300054	!
PWB	C901A	C COVER	SB1925A	1	27301216	!
PWB	C903	TF C	ECQ-V100-104J	1	374731044	
PWB	C904	TF C	ECQ-V100-104J	1	374731044	
PWB	C905	ELECT C	CE62W63V-5600M	1	3504414	
PWB	C906	ELECT C	CE62W63V-5600M	1	3504414	
PWB	C909	VR C	CE04W50V-22M (VR)	1	394682207	
PWB	C933	TF C	ECQ-V50V-104J	1	374721044	
PWB	C934	TF C	ECQ-V50V-104J	1	374721044	
PWB	C950	TF C	ECQ-V50V-104J	1	374721044	

PWB	C951	VR C	CE04W16V-220M (VR)	1	394642217	
PWB	C952	VR C	CE04W16V-220M (VR)	1	394642217	
PWB	C953	VR C	CE04W16V-220M (VR)	1	394642217	
PWB	C954	VR C	CE04W16V-220M (VR)	1	394642217	
PWB	C955	TF C	ECQ-B50V-223J	1	374722234	
PWB	R104	VARI R	N17RGL20KB15M	1	5151508	
PWB	R301	CARBON R	R16J-1K	1	417341024	
PWB	R302	CARBON R	R16J-1M	1	417341054	
PWB	R303	CARBON R	R16J-100K	1	417341044	
PWB	R304	CARBON R	R16J-18K	1	417341834	
PWB	R305	CARBON R	R16J-33K	1	417343334	
PWB	R306	CARBON R	R16J-4.7K	1	417344724	
PWB	R307	CARBON R	R16J-100K	1	417341044	
PWB	R308	CARBON R	R16J-47K	1	417344734	
PWB	R311	CARBON R	R16J-5.6K	1	417345624	
PWB	R312	CARBON R	R16J-5.6K	1	417345624	
PWB	R313	CARBON R	R16J-5.6K	1	417345624	
PWB	R314	CARBON R	R16J-5.6K	1	417345624	
PWB	R315	CARBON R	R16J-100K	1	417341044	
PWB	R316	CARBON R	R16J-1K	1	417341024	
PWB	R501	CARBON R	R16J-1K	1	417341024	
PWB	R502	CARBON R	R16J-47K	1	417344734	
PWB	R503	CARBON R	R16J-5.6K	1	417345624	
PWB	R504	CARBON R	R16J-270	1	417342714	
PWB	R505	NF CARBON R	R25J-1.0K	1	415471024	!
PWB	R506	NF CARBON R	R25J-1.0K	1	415471024	!
PWB	R507	CARBON R	R16J-33K	1	417343334	
PWB	R508	NF CARBON R	R25J-47	1	415474704	!
PWB	R509	CARBON R	R16J-1K	1	417341024	
PWB	R510	CARBON R	R16J-100K	1	417341044	
PWB	R511	NF CARBON R	R25J-82	1	415478204	!
PWB	R512	NF CARBON R	R25J-68	1	415476804	!
PWB	R513	NF CARBON R	R25J-82	1	415478204	!
PWB	R514	NF CARBON R	R25J-82	1	415478204	!
PWB	R515	CARBON R	R16J-12K	1	417341234	
PWB	R516	CARBON R	R16J-12K	1	417341234	
PWB	R517	CARBON R	R16J-3.3K	1	417343324	
PWB	R521	CARBON R	R16J-220	1	417342214	
PWB	R522	CARBON R	R16J-220	1	417342214	
PWB	R526	METAL O R	RS1/2WBJ-150	1	443521514	
PWB	R527	CARBON R	R16J-270	1	417342714	
PWB	R528	METAL O R	RS1/2WBJ-390	1	443523914	
PWB	R531	METAL PR	RF-5EGKR22	1	4000201	
PWB	R531 or	METAL P R	RGC55C 0.22 K	(1)	4000157	
PWB	R533	METAL R	RNU1WCJ-3.3	1	453630334	
PWB	R534	CARBON R	R16J-100	1	417341014	
PWB	R541	CARBON R	R16J-820	1	417348214	
PWB	R542	CARBON R	R16J-150	1	417341514	
PWB	R543	CARBON R	R16J-100	1	417341014	
PWB	R544	TRIM R	N06HR100BC	1	5210359	
PWB	R601	CARBON R	R16J-5.6K	1	417345624	

PWB	R602	CARBON R	R16J-100K	1	417341044	
PWB	R603	CARBON R	R16J-150K	1	417341544	
PWB	R604	CARBON R	R16J-180	1	417341814	
PWB	R605	CARBON R	R16J-10K	1	417341034	
PWB	R606	CARBON R	R16J-10K	1	417341034	
PWB	R607	CARBON R	R16J-22	1	417342204	
PWB	R608	CARBON R	R16J-22	1	417342204	
PWB	R609	CARBON R	R16J-39K	1	417343934	
PWB	R610	CARBON R	R16J-560K	1	417345644	
PWB	R611	CARBON R	R16J-820K	1	417348244	
PWB	R612	CARBON R	R16J-39K	1	417343934	
PWB	R613	CARBON R	R16J-470K	1	417344744	
PWB	R614	CARBON R	R16J-120K	1	417341244	
PWB	R615	CARBON R	R16J-22K	1	417342234	
PWB	R616	CARBON R	R16J-100K	1	417341044	
PWB	R617	CARBON R	R16J-1K	1	417341024	
PWB	R619	CARBON R	R16J-22K	1	417342234	
PWB	R620	CARBON R	R16J-100K	1	417341044	
PWB	R621	CARBON R	R16J-1K	1	417341024	
PWB	R622	CARBON R	R16J-10K	1	417341034	
PWB	R623	CARBON R	R16J-100K	1	417341044	
PWB	R624	CARBON R	R16J-100K	1	417341044	
PWB	R625	CARBON R	R16J-180K	1	417341844	
PWB	R626	CARBON R	R16J-2.2M	1	417342254	
PWB	R627	CARBON R	R16J-680K	1	417346844	
PWB	R628	CARBON R	R16J-330K	1	417343344	
PWB	R629	CARBON R	R16J-22K	1	417342234	
PWB	R651	METAL O R	RS1/2WBJ-12K	1	443521234	
PWB	R701	RESISTOR	PTFL04BC222 (100)	1	4000230	
PWB	R901	METAL O R	RS1WBJ-820	1	443628214	
PWB	R902	METAL O R	RS1WBJ-820	1	443628214	
PWB	R903	CARBON R	R16J-10K	1	417341034	
PWB	R904	METAL O R	RS1/2WBJ-1K	1	443521024	
PWB	R951	NF CARBON R	R25J-82	1	415478204	
PWB	R952	NF CARBON R	R25J-82	1	415478204	
PWB	R953	METAL O R	RS1/2WBJ-6.8K	1	443526824	
PWB	R954	METAL O R	RS1/2WBJ-6.8K	1	443526824	
PWB	R971	CARBON R	R16J-10K	1	417341034	
PWB	R972	CARBON R	R16J-47K	1	417344734	
PWB	F901A	FUSE HOL	NSCT-1P2506	1	25052609	!
PWB	F901A or	FUSE HOL	NSCT-1P2031	(1)	25052133	!
PWB	F901B	FUSE HOL	NSCT-1P2506	1	25052609	!
PWB	F901B or	FUSE HOL	NSCT-1P2031	(1)	25052133	!
PWB	JL535A	SOCKET AS	NSAS-2P1335	1	2009990876UL	
PWB	JL601	JUMPER LEAD	JL3 120 H	1	---	
PWB	JL601A	WIRE HOL	NSCT-3P894	1	25051107	
PWB	JL601B	WIRE HOL	NSCT-3P894	1	25051107	
PWB	P101	PIN JACK	NPJ-1PDB581	1	25045801	
PWB	P301B	PLUG	NPLG-5P133	1	25055149	
PWB	P302A	SOCKET AS	NSAS-10P0798	1	2009990587UL	
PWB	P531	PLUG	NPLG-2P29	1	25055038	

PWB	P631	PLUG	NPLG-2P29	1	25055038	
PWB	P632A	PLUG	NPLG-3P131	1	25055147	
PWB	P901A	PLUG	NPLG-3P150	1	25055166	
PWB	P901B	SOCKET AS	NSAS-6P1333	1	2009990874UL	
PWB	P902A	PLUG	NPLG-2P632	1	25055676	!
PWB	E701	SHLD CASE	(THERMISTOR)	1	27225154A	
PWB	E810	RETAINER	KANAGU (EARTH)	1	27141059	

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